### A new species of Aemona Hewitson, [1868] from Vietnam

(Lepidoptera, Amathusiidae)

# by A. L. DEVYATKIN & A. L. MONASTYRSKII received 1.V.2004

**Summary**: A new spcies, *Aemona falcata* spec. nov., from the southern part of Central Vietnam (Khanh Hoa Province), is described and illustrated. The new species differs from those areviously known in a combination of the external characters and genitalia.

In addition to the 2 species of Aemona Hewitson, [1868] recognized in the latest review (NISHIMURA, 1999) and to the 3 species described after that review (MONASTYRSKII & DEVYATKIN, 2003), a further new species was discovered in 2003 in the southern part of Central Vietnam, or Annam (Khanh Hoa Province). It has proved to be different from other species in the combination of minor characters of appearance and genitalia which were stated as being the key ones for separating the species of Aemona (Monastyrskii & Devyatkin, loc. cit.).

The holotype and most of the paratypes of the new species are deposited in the collection of the Department of Entomology, Moscow State University (Russia); one male paratype is going to be transferred to the collection of The Natural History Museum (London).

Abbreviations FW – forewing HW – hindwing

# Aemona **falcata spec. nov.** (colour plate IIb, figs. 1-4)

Holotype &: Central Vietnam, Khanh Hoa Province, Dien Khanh district, Hon Ba Provincial Nature Reserve, 1300 m, forest edge, 13.IV.2003, A. L. Момазтукски leg.

Puratypes: 2  $\sigma$ 3, the same locality as the holotype, 1400 m, forest, 5.IV.2003; 1  $\sigma$ 3, the same locality, 1300 m, forest, 7.IV.2003; 1  $\sigma$ 4, the same locality, 1200 m, forest, 12.IV.2003 (all A. L. Monastyrskii leg.).

#### Description

Male (colour plate IIb, figs. 1, 2)

Medium-sized; FW apex strongly falcate and termen strongly convex; HW termen conspicuously angled at vein 4.

Upperside. Ground colour of both wings rather uniform, yellowish ochreous, sometimes slightly darker near FW base and on HW. FW: apex and termen narrowly and diffusely brownish; a fine concave streak at the end of cell (upper part); discal line conspicuous, almost straight, interrupted by veins and protruding towards termen along both sides of veins 2-4.

HW: submarginal lunules outlined with brown from both sides, merged in spaces 4-5 to 7, not conspicuously reduced towards tornus.

Underside, Ground colour pale ochreous brown, paler in the basal and postdiscal areas; marginal lunules very faintly outlined; discal line looks as being faintly shaded with a paler colour from the outside. FW with 3 to 5 ocelli, all dot-like, except that in space 2 which is filled with the around colour and white-pupilled in some specimens; HW with 6-7 ocelli, those in spaces 1, 2 and 6 filled with vellow or white and those in spaces 4-5 almost dot-like.

FW length 35-36 mm (38 mm in one male).

Female (colour plate IIb, figs. 3, 4).

Upperside, Differs from that of the male in being darker brownish. FW colouration rather contrasting due to basal and postdiscal areas being pale ochreous (as in the male); discal line broader and almost not interrupted; conspicuous marginal lunules at termen. HW submarginal lunules much paler than the ground colour.

Underside. More grevish brown than in the male: spotting pattern the same. FW length 40 mm.

#### ♂-aenitalia (fia. 1. A-E).

Uncus about as long as tegumen, leaf-like extended near the middle, blunt and extended at tip (dorsal view), gently bent down (lateral view). Subunci slightly divergent, obliquely and conspicuously extended at tips. Clasp rather slender, bent at the middle, its distal part ("foot") about  $\frac{1}{2}$  length of clasp; end of clasp rounded, with numerous very small spines at the very tip (in some specimens, tending to be arranged in rows). Juxta roughly rhomb-shaped (lateral view), its basal process of medium length; gedeagus as long as clasp, evenly curved in lateral view, extended and relatively strongly curved in dorsal view, with small irregular spines on a conspicuous rib at the left side.

#### Q-aenitalia (fia. 1F).

Antevaginal plate covered with lateral wrinkles and is in general similar to that of A. kontumei Monastyrskii & Devyatkin, 2003; this single female does not allow us to detect reliable differences in the female genitalia.

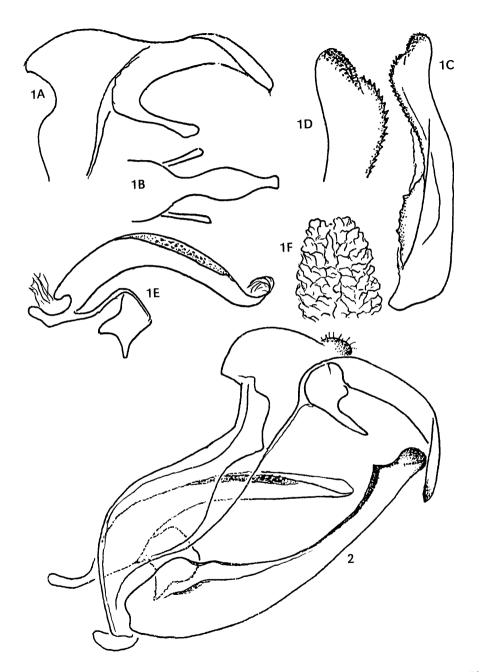
#### Diaanosis

The new species is most similar to A. kontumei in external characters; however, the FW apex is even more falcate. The male genitalia combine the characters of several species: the uncus is rather peculiar but is clearly similar to those of A. kontumei and A. simulatrix Monastyrskii & DEVYATKIN, 2003; the clasp resembles that of A. simulatrix, but the spines at its tip more recall those of A. implicata Monastyrskii & Devyatkin, 2003; the general shape and spining of the aedeagus resemble A. amathusia tonkinensis Rothschild, 1916.

The female genitalia are similar to those of A. kontumei.

Fig. 1: Male and female genitalia of Aemona falcata spec. nov. (A - tegumen, uncus and subunci, lateral view; B – id., dorsal view; C – left clasp, dorsal view; D – end of clasp, ventral view; E aedeagus and juxta, lateral view; F – antevaginal plate, ventral view).

Fig. 2: Male genitalia of Aemona oberthueri STICHEL, 1906 (Siao Lou, ex coll. BMNH), general lateral view.



#### Discussion

In 1999, NISHIMURA published his review of the genus *Aemona*, with the description of a new related genus (NISHIMURA, 1999). Having examined a lot of type material on *Aemona* in the collection of The Natural History Museum (London), he has finally come to the conclusion that all the diversity of subspecies and forms described in this genus can be synonymized with the nominate subspecies of only two species, viz. *A. amathusia* (HEWITSON, 1867) and *A. lena* Atkinson, 1871 (except *A. amathusia oberthueri* Stichel, 1906, of which he has seen no sufficient material), obviously intending to put a full stop in the discussion of the taxonomy of the group. The two species recognized by NISHIMURA differed in the appearance and seemed to have some distinct differences in the genitalia (although his drawings of clasp and aedeagus have later proved to be non-informative due to the lack of detail).

However, the full stop did not take place.

In 2003, we described further 3 species of *Aemona*, all from Central Vietnam, having formally accepted the point of view of NISHIMURA and having compared these species with the former *A. amathusia tonkinensis* Rothschild, 1916 (= *A. amathusia amathusia*, sensu NISHIMURA, 1999). Thus, the criteria for the separation of the *Aemona*-species became rather clear: these were combinations of differences (sometimes minor, but always constant) in the appearance and genitalia. In view of this, the present description of the 4<sup>th</sup> new species, differing from those previously known in the key characters, seems quite logical. Moreover, having found principal differences in the male genitalia of *A. amathusia oberthueri* (West China, Siao Lou) from all other taxa (fig. 2), we are firm in our statement that it represents another separate species, *A. oberthueri* STICHEL, 1906, **stat. nov.** 

The taxonomic situation in the genus *Aemona* now looks much more complicated than it was suggested before. Four new species described in the *A. amathusia*-group suggest that a similar pattern of speciation may be found in the *A. lena*-group (that is indirectly confirmed by a number of almost sympatric forms figured by NISHIMURA); some of the new species (at least, *A. kontumei* and *A. simulatrix*) combine characters of *A. amathusia*, *A. oberthueri* and *A. lena*, thus indicating that there are no clear borders between these groups.

In general, we are strongly inclined to believe that in South-East Asia such forest-dwelling groups as the genus *Aemona* may increase their tendency to endemism at the extremes of their distribution, where suitable conditions of the forested areas become more patchy and peculiar. Such tendency was suggested earlier for some skippers, in particular for species of the genus *Celaenorrhinus* HÜBNER, 1819 (DEVYATKIN, 2000).

The authors hope to continue the taxonomic work on the genus *Aemona* and prepare a full revision on this genus in the near future.

#### References

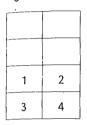
DEVYATKIN, A. L. (2000): Hesperiidae of Vietnam, 8. Three new species of *Celaenorrhinus* Hübner, 1819, with notes on the *C. maculosa* (C. & R. Felder, [1867])-oscula Evans, 1949 group (Lepidoptera, Hesperiidae). – Atalanta **31** (1/2): 205–211.

Monastyrskii, A. L. & A. L. Devyatkin (2003): New taxa and new records of butterflies from Vietnam, 2 (Lepidoptera, Rhopalocera). – Atalanta 34 (1/2): 75-109.

NISHIMURA, M. (1999): A review of the genus Aemona HEWITSON (Lepidoptera, Nymphalidae), with descriptions of a new genus and a new species from North Myanmar. Trans. lepid. Soc. Japan **50** (1): 1–15.

Explanation of colour plate IIb (p. 155):

- Fig. 1: Aemona falcata spec. nov., holotype  $\vec{\sigma}$ , C. Vietnam, Khanh Hoa Province, Dien Khanh district, Hon Ba Provincial Nature Reserve, 1300 m, 13.IV.2003, A. L. Monastyrskii leg., upperside.
- Fig. 2: Id., underside.
- Fig. 3: Aemona falcata spec. nov., paratype  $\mathfrak{P}$ , C. Vietnam, Khanh Hoa Province, Dien Khanh district, Hon Ba Provincial Nature Reserve, 1200 m, 12.IV.2003, A. L. Monastyrskii leg., upperside.
- Fig. 4: Id., underside.



Addresses of the authors

ALEXEY L. DEVYATKIN
Department of Entomology
Faculty of Biology
Moscow State University
119992 Moscow, Russia

ALEXANDER L. MONASTYRSKII Vietnam-Russia Tropical Centre Ngia Do, Cau Giay Hanoi, Vietnam

#### Colour plate Ila

Monastyrskii, A. L.: Two new species of Nymphalidae (Satyrinae) from Vietnam (Lepidoptera, Rhopalocera). – Atalanta 35 (1/2): 45–49.

Fig. 1: Elymnias saola spec. nov., holotype & C. Vietnam, Nghe An Province.

Fig. 2: Id. underside.

Fig. 3: *Lethe huongii* spec. nov., holotype ♀, N. Vietnam, Lang Son Province, Huu Lien Nature Reserve.

Fig. 4: Id. underside.

1	2
3	4

#### Colour plate IIb

DEVYATKIN, A. L. & A. L. MONASTYRSKII: A new species of *Aemona* HEWITSON, [1868] from Vietnam (Lepidoptera, Amathusiidae). – Atalanta **35** (1/2): 51–55.

Fig. 1: Aemona falcata spec. nov., holotype  $\mathcal{S}$ , C. Vietnam, Khanh Hoa Province, Dien Khanh district, Hon Ba Provincial Nature Reserve, 1300 m, 13.IV.2003, A. L. Monastyrskii leg., upperside.

Fig. 2: Id., underside.

Fig. 3: Aemona falcata spec. nov., paratype ♀, C. Vietnam, Khanh Hoa Province, Dien Khanh district, Hon Ba Provincial Nature Reserve, 1200 m, 12.IV.2003, A. L. Монаsтукски leg., upperside.

Fig. 4: ld., underside.

1	2
3	4

## Colour plate IIa/b

